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10 CFR 50.90

RS-02-196

November 8, 2002

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555

LaSalle County Station, Units 1 and 2  
Facility Operating License Nos. NPF-11 and NPF-18  
NRC Docket Nos. 50-373 and 50-374

**Subject:** Revised Request for Amendment to Technical Specifications  
Justification for the Continued Use of Technical Specifications, Section  
3.4.11, "RCS Pressure and Temperature (P/T) Limits"

**Reference:** Letter from K. R. Jury (EGC) to U.S. NRC, "Request for Amendment to  
Technical Specifications Justification for the Continued Use of Technical  
Specifications, Section 3.4.11, 'RCS Pressure and Temperature (P/T)  
Limits,'" dated October 21, 2002

Exelon Generation Company (EGC), LLC, in the referenced letter, in accordance with 10 CFR 50.90, requested an amendment to Facility Operating License Nos. NPF-11 and NPF-18. Specifically, the proposed change requested that the current pressure and temperature (P/T) limit curves in Technical Specification (TS) 3.4.11, "RCS Pressure and Temperature (P/T) Limits," remain acceptable for use until December 15, 2004. The proposed change would allow sufficient time for the incorporation of the General Electric Topical Report NEDC-32983P, "General Electric Methodology for Reactor Pressure Vessel Fast Neutron Flux Evaluation," methodology into the P/T curves in TS 3.4.11.

The NRC requested that EGC revise the referenced letter to include the December 15, 2004 applicability on the appropriate TS pages. This letter includes the revised amendment request with the requested TS pages.

The information supporting the proposed change is subdivided as follows.

- Attachment 1 is the notarized affidavit.
- Attachment 2 provides our evaluation supporting the proposed change.
- Attachment 3 provides the marked up TS pages.
- Attachment 4 provides the retyped TS pages.

Pool

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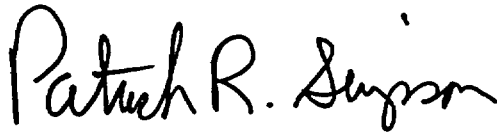
The proposed change has been reviewed by the LaSalle County Station Plant Operations Review Committee (PORC) and approved by the Nuclear Safety Review Board (NSRB) in accordance with the Quality Assurance Program.

EGC is notifying the State of Illinois of this application for amendment by transmitting a copy of this letter and its attachments to the designated State Official.

We request approval of the proposed changes by December 1, 2002 with an implementation period of 15 days.

Should you have any questions concerning this submittal, please contact Mr. T. W. Simpkin at (630) 657-2821.

Sincerely,



Patrick R. Simpson  
Manager - Licensing  
Mid-West Regional Operating Group

Attachments:

- Attachment 1. Notarized Affidavit
- Attachment 2. Evaluation of Proposed Change
- Attachment 3. Markup of Proposed Technical Specifications Page Changes
- Attachment 4. Retyped Pages for Technical Specifications Change

cc: Regional Administrator – NRC Region III  
NRC Project Manager, NRR - LaSalle County Station  
NRC Senior Resident Inspector – LaSalle County Station  
Office of Nuclear Facility Safety – Illinois Department of Nuclear Safety

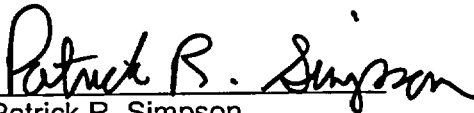
ATTACHMENT 1  
Affidavit

STATE OF ILLINOIS )  
COUNTY OF DUPAGE )  
IN THE MATTER OF: )  
EXELON GENERATION COMPANY (EGC), LLC ) Docket Numbers  
LASALLE COUNTY STATION - UNIT 1 and UNIT 2 ) 50-373 and 50-374

SUBJECT: Revised Request for Amendment to Technical Specifications  
Justification for the Continued Use of Technical  
Specifications, Section 3.4.11, "RCS Pressure and  
Temperature (P/T) Limits"

AFFIDAVIT

I affirm that the content of this transmittal is true and correct to the best of  
my knowledge, information, and belief.

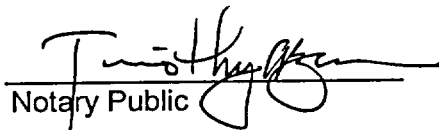
  
Patrick R. Simpson  
Manager - Licensing  
Mid-West Regional Operating Group

Subscribed and sworn to before me, a Notary Public in and

for the State above named, this 8<sup>th</sup> day of

November, 2002



  
Notary Public

**ATTACHMENT 2**  
**Evaluation of Proposed Change**  
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- 1.0 INTRODUCTION
- 2.0 DESCRIPTION OF PROPOSED AMENDMENT
- 3.0 BACKGROUND
- 4.0 REGULATORY REQUIREMENTS & GUIDANCE
- 5.0 TECHNICAL ANALYSIS
- 6.0 REGULATORY ANALYSIS
- 7.0 NO SIGNIFICANT HAZARDS CONSIDERATION
- 8.0 ENVIRONMENTAL CONSIDERATION
- 9.0 PRECEDENT
- 10.0 REFERENCES

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**1.0 INTRODUCTION**

In accordance with 10 CFR 50.90, Exelon Generation Company (EGC), LLC, hereby requests an amendment to Facility Operating License Nos. NPF-11 and NPF-18. Specifically, the proposed change requests that the current pressure and temperature (P/T) limit curves in Technical Specification (TS) 3.4.11, "RCS Pressure and Temperature (P/T) Limits," remain acceptable for use until December 15, 2004. The proposed change will allow sufficient time for the incorporation of the General Electric Topical Report NEDC-32983P, "General Electric Methodology for Reactor Pressure Vessel Fast Neutron Flux Evaluation," methodology into the P/T curves in TS 3.4.11.

EGC has performed new fluence calculations using NEDC-32983P methodology for LaSalle County Station (LSCS) Units 1 and 2 and compared the results from these calculations to the current TS 3.4.11 P/T curves. The results of the fluence calculation comparisons demonstrate that the current P/T curves in TS 3.4.11 remain valid until at least 15.7 Effective Full Power Years (EFPY). As of June 1, 2002, LSCS Unit 1 operating time was approximately 11.6 EFPY and Unit 2 was approximately 11.0 EFPY. Considering a 100% capacity factor, 15.7 EFPY will not be reached on either unit until after June 2006.

EGC is currently scheduled to submit to the NRC a proposed change to TS 3.4.11 in November of 2002. The proposed changes will utilize NEDC-32983P methodology to calculate the P/T curves in TS 3.4.11 for LSCS Units 1 and 2.

**2.0 DESCRIPTION OF PROPOSED AMENDMENT**

The proposed change requests that the current LSCS, Units 1 and 2, P/T limit curves in TS 3.4.11 remain acceptable for use until December 15, 2004. TS Figures 3.4.11-1 through Figure 3.4.11-6 are revised to indicate the December 15, 2004 applicability.

**3.0 BACKGROUND**

EGC, formerly Commonwealth Edison (ComEd) Company, in Reference 1, requested changes to TS Section 3/4.4.6, "Pressure/Temperature Limits, Reactor Coolant System," for LSCS Units 1 and 2. The proposed changes revised the P/T limits for the Reactor Pressure Vessel (RPV) of each unit to a maximum of 32 EFPY.

During teleconferences between members of the NRC and EGC in support of the review of the above proposed TS changes, the NRC stated that the neutron fluence calculations used to develop the revised P/T limits were not consistent with the guidance contained in Draft Regulatory Guide DG-1053, "Calculational and Dosimetry Methods for Determining Pressure Vessel Neutron Fluence," dated September 1999. EGC in Reference 2 requested the NRC to approve the proposed changes to TS 3/4.4.6 until December 15,

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2002 to allow sufficient time to resolve this issue. The NRC in Reference 3 approved the proposed changes to TS 3/4.4.6 for an interim period not to exceed December 15, 2002.

In March 2001, Draft Regulatory Guide DG-1053 was approved as Regulatory Guide (RG) 1.190, "Calculational and Dosimetry Methods for Determining Pressure Vessel Neutron Fluence." The NEDC-32983P methodology is consistent with the guidance contained in RG 1.190. In a letter dated September 14, 2001, the NRC approved NEDC-32983P for use by licensees.

#### 4.0 REGULATORY REQUIREMENTS & GUIDANCE

10 CFR 50.36(c)(2)(ii)(B), "Criterion 2," requires that a process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier, must be included in a licensee's TS.

#### 5.0 TECHNICAL ANALYSIS

##### 5.1 Design Bases

EGC has performed new fluence calculations using NEDC-32983P methodology for LSCS Units 1 and 2. The results of the calculations are contained in Reference 5 and are as follows.

- The 32 EFPY fluences calculated with the NEDC-32983P methodology are greater than the fluences used in the development of the current 32 EFPY P/T limits in the LSCS TS. TS 3/4.4.6 was renumbered to TS 3.4.11, "RCS Pressure and Temperature (P/T) Limits," during the conversion of LSCS TS to the Improved Technical Specification format.
- As shown in Attachment A to Reference 4, the peak surface fluence used in the development of the Unit 1 current 32 EFPY P/T limits is  $5.0E17$  neutrons per centimeter squared ( $n/cm^2$ ) and the resultant 1/4 T fluence is  $3.5E17$   $n/cm^2$ . As shown in the attachments to Reference 5, the Unit 1 peak surface flux determined in the proposed calculation is  $1.01E09$  neutrons per centimeter squared – second ( $n/cm^2$ -s). A conservative estimate of the neutron surface fluence at various points in plant life can be obtained by multiplying the calculated flux by the appropriate EFPY. This approach is conservative in that it assumes that the calculated flux value has been present since initial plant operation and does not account for the reduced flux that would have been experienced prior to power uprate and the transition to 24 month fuel cycles. Using this method, the peak surface fluence of  $5.0E17$   $n/cm^2$  used in development of the current P/T limits will occur at approximately 15.7 EFPY.

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- As shown in Attachment A to Reference 4, the peak surface fluence used in the development of the Unit 2 current 32 EFPY P/T limits is  $6.03E17$  n/cm<sup>2</sup> and the resultant 1/4 T fluence is  $4.2E17$  n/cm<sup>2</sup>. As shown in the attachments to Reference 5, the Unit 2 peak surface flux determined in the proposed calculation is  $1.08E09$  n/cm<sup>2</sup>-s. Using the method described above, the peak surface fluence of  $6.03E17$  n/cm<sup>2</sup> used in development of the current P/T limits will occur at approximately 17.7 EFPY.

Based on the above, the current P/T curves in TS 3.4.11 for LSCS Units 1 and 2 remain valid until at least 15.7 EFPY. As of June 1, 2002, LSCS Unit 1 operating time was approximately 11.6 EFPY and Unit 2 was approximately 11.0 EFPY. Considering a 100% capacity factor, 15.7 EFPY will not be reached on either unit until after June 2006.

EGC is currently scheduled to submit to the NRC proposed changes to TS 3.4.11 in November of 2002. The proposed changes will utilize NEDC-32983P methodology to calculate the P/T curves in TS 3.4.11 for LSCS Units 1 and 2.

EGC requests that the current P/T curves in TS 3.4.11 remain acceptable for use until December 15, 2004, to allow sufficient time for the incorporation of the NEDC-32983P methodology into the P/T curves in TS 3.4.11 for LSCS Units 1 and 2. The request is based on the above information that using NEDC-32983P methodology, the current TS 3.4.11 P/T curves remain valid during this period of time.

## 5.2 Risk Information

This submittal is not based on risk informed decision making.

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**6.0 REGULATORY ANALYSIS**

The P/T limits are prescribed during normal operation to avoid encountering pressure, temperature, and temperature rate of change conditions that might cause undetected flaws to propagate and cause nonductile failure of the reactor coolant pressure boundary, a condition that is unanalyzed. Therefore, the P/T Limit Curves must be included in LSCS TS in accordance with 10 CFR 50.36(c)(2)(ii)(B).

**7.0 NO SIGNIFICANT HAZARDS CONSIDERATION**

EGC has evaluated the proposed change to the TS for LSCS, Unit 1 and Unit 2, and has determined that the proposed change does not involve a significant hazards consideration and is providing the following information to support a finding of no significant hazards consideration.

**Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?**

Response: No

The proposed change requests that the current pressure and temperature (P/T) limit curves in TS 3.4.11, "RCS Pressure and Temperature (P/T) Limits," remain acceptable for use until December 15, 2004. The proposed change is to allow sufficient time for the incorporation of the General Electric Topical Report NEDC-32983P, "General Electric Methodology for Reactor Pressure Vessel Fast Neutron Flux Evaluation," methodology into the P/T curves in TS 3.4.11. NEDC-32983P methodology has been previously approved by the NRC for use by licensees. The P/T limits are prescribed during normal operation to avoid encountering pressure, temperature, and temperature rate of change conditions that might cause undetected flaws to propagate and cause nonductile failure of the reactor coolant pressure boundary, a condition that is unanalyzed. Thus, the proposed change does not have any affect on the probability of an accident previously evaluated.

The P/T curves are used as operational limits during heatup or cooldown maneuvering, when pressure and temperature indications are monitored and compared to the applicable curve to determine that operation is within the allowable region. The P/T curves provide assurance that station operation is consistent with previously evaluated accidents. Thus, the radiological consequences of any accident previously evaluated are not increased.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.



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**Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?**

Response: No

The proposed change does not change the control parameters governing unit operation or the response of plant equipment to transient conditions. The proposed change does not introduce any new equipment, modes of system operation or failure mechanisms.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

**Does the change involve a significant reduction in a margin of safety?**

Response: No

The proposed change will allow sufficient time for the incorporation of the General Electric Topical Report NEDC-32983P methodology into the P/T curves in TS 3.4.11. NEDC-32983P methodology has been previously approved by the NRC for use by licensees.

EGC has performed new fluence calculations using NEDC-32983P methodology for LSCS Units 1 and 2 and compared the results from these calculations to the current TS 3.4.11.P/T curves. The results of the fluence calculation comparisons demonstrate that the current P/T curves in TS 3.4.11 remain valid until at least 15.7 Effective Full Power Years (EFPY). As of June 1, 2002, LSCS Unit 1 operating time was approximately 11.6 EFPY and Unit 2 was approximately 11.0 EFPY. Considering a 100% capacity factor, 15.7 EFPY will not be reached on either unit until after June 2006.

EGC is currently scheduled to submit to the NRC a proposed change to TS 3.4.11 in the November of 2002. The proposed changes will utilize NEDC-32983P methodology to calculate the P/T curves in TS 3.4.11 for LSCS Units 1 and 2.

The request that the current P/T curves remain valid until December 15, 2004, is based on the above information that using NEDC-32983P methodology, the current TS 3.4.11 P/T curves remain valid during this period of time.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

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Based upon the above, EGC concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

## 8.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

## 9.0 PRECEDENT

The proposed amendment incorporates into the LSCS TS a change that is specific to LSCS, and therefore, this proposed amendment does not rely upon the issuance of amendments to other licensees.

## 10.0 REFERENCES

- (1) Letter from R.M. Krich (ComEd) to U. S. NRC, "Application for Amendment to Appendix A, Technical Specifications, Section 3/4.4.6, "Pressure Temperature Limits, Reactor Coolant System," and Request for Exemption from 10 CFR 50.60, "Acceptance Criteria for Fracture Prevention Measures for Lightwater Nuclear Power Reactors for Normal Operation," dated February 29, 2000
- (2) Letter from Charles G. Pardee (ComEd) to U. S. NRC, "Supplement to Application for Amendment to Appendix A, Technical Specifications, Section 3/4.4.6, "Pressure Temperature Limits, Reactor Coolant System," and Request for Exemption from 10 CFR 50.60, "Acceptance Criteria for Fracture Prevention Measures for Lightwater Nuclear Power Reactors for Normal Operation," dated August 18, 2000
- (3) Letter from Donna M. Skay (U. S. NRC) to O. D. Kingsley (ComEd), "LaSalle County Station, Units 1 and 2 – Issuance of Amendments (TAC Nos. MA8403 and MA8404)," dated November 8, 2000
- (4) Letter from Charles G. Pardee (ComEd) to U. S. NRC, "Revised General Electric Nuclear Energy Reports, 'Pressure Temperature Curves for ComEd LaSalle Unit

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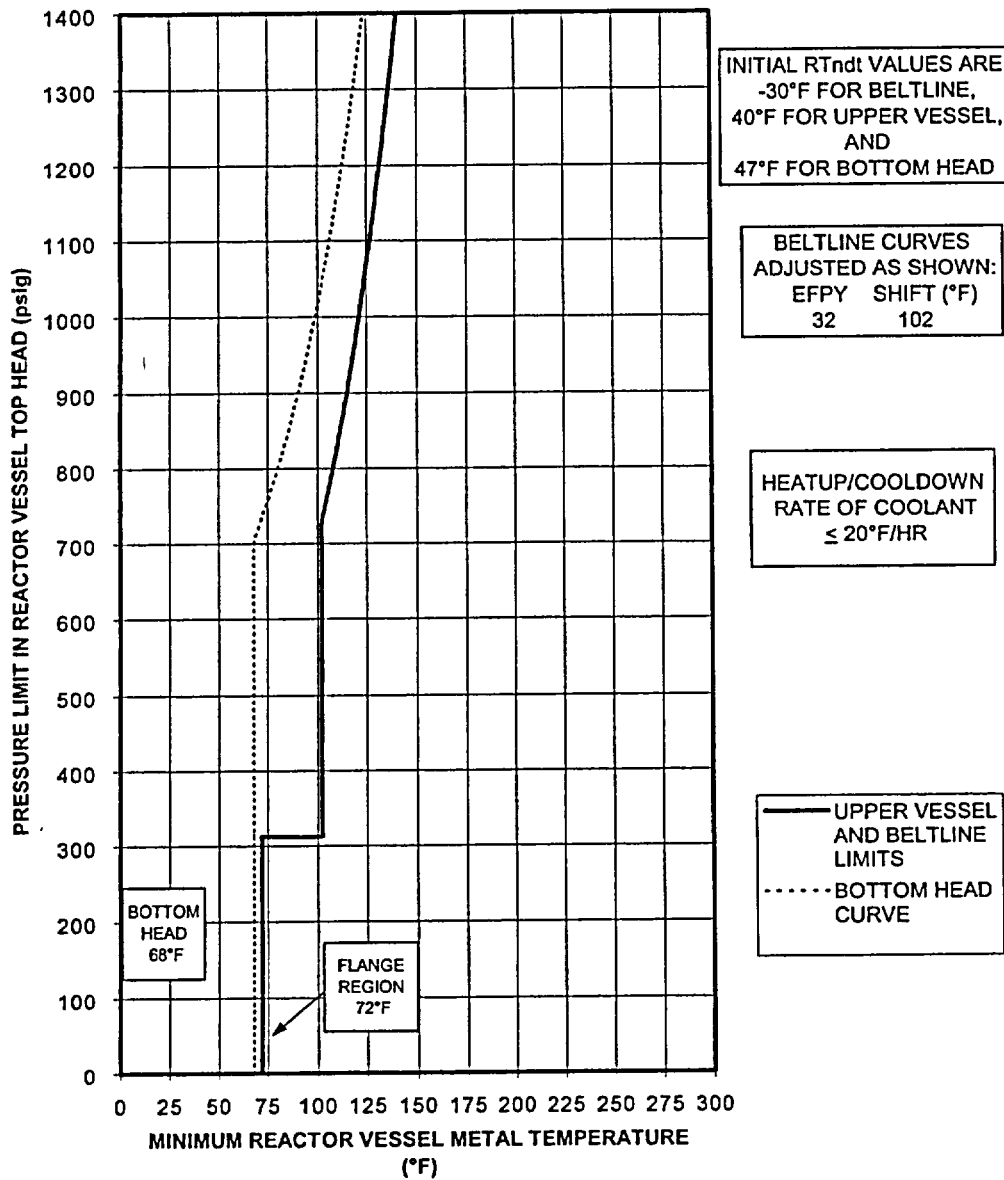
1' and 'Pressure Temperature Curves for ComEd LaSalle Unit 2,'" dated June 26, 2000

- (5) Letter from T. Simpkin (Exelon Generation Company, LLC) to U.S. NRC, "Justification for the Continued Use of Technical Specifications, Section 3.4.11, 'RCS Pressure and Temperature (P/T) Limits,'" dated July 19, 2002

**ATTACHMENT 3**

**MARKUP OF PROPOSED TECHNICAL SPECIFICATIONS PAGE CHANGES**

Revised TS Pages

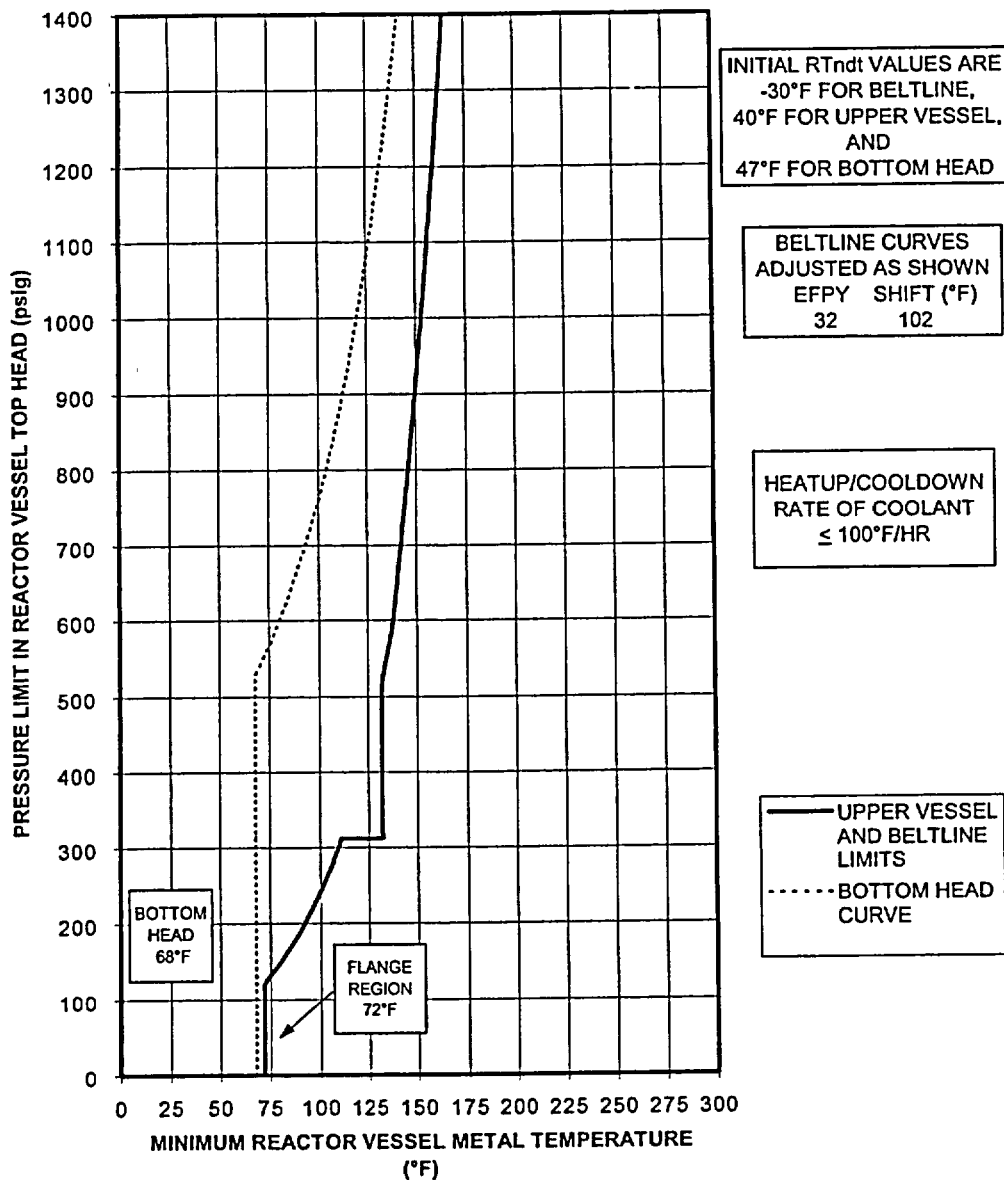


P-T Curves for Hydrostatic or Leak Testing

Figure 3.4.11-1 (Page 1 of 1)

Unit 1  
Minimum Reactor Vessel Metal Temperature vs.  
Reactor Vessel Pressure (Valid up to 32 EPFY)

UNTIL DECEMBER 15, 2004

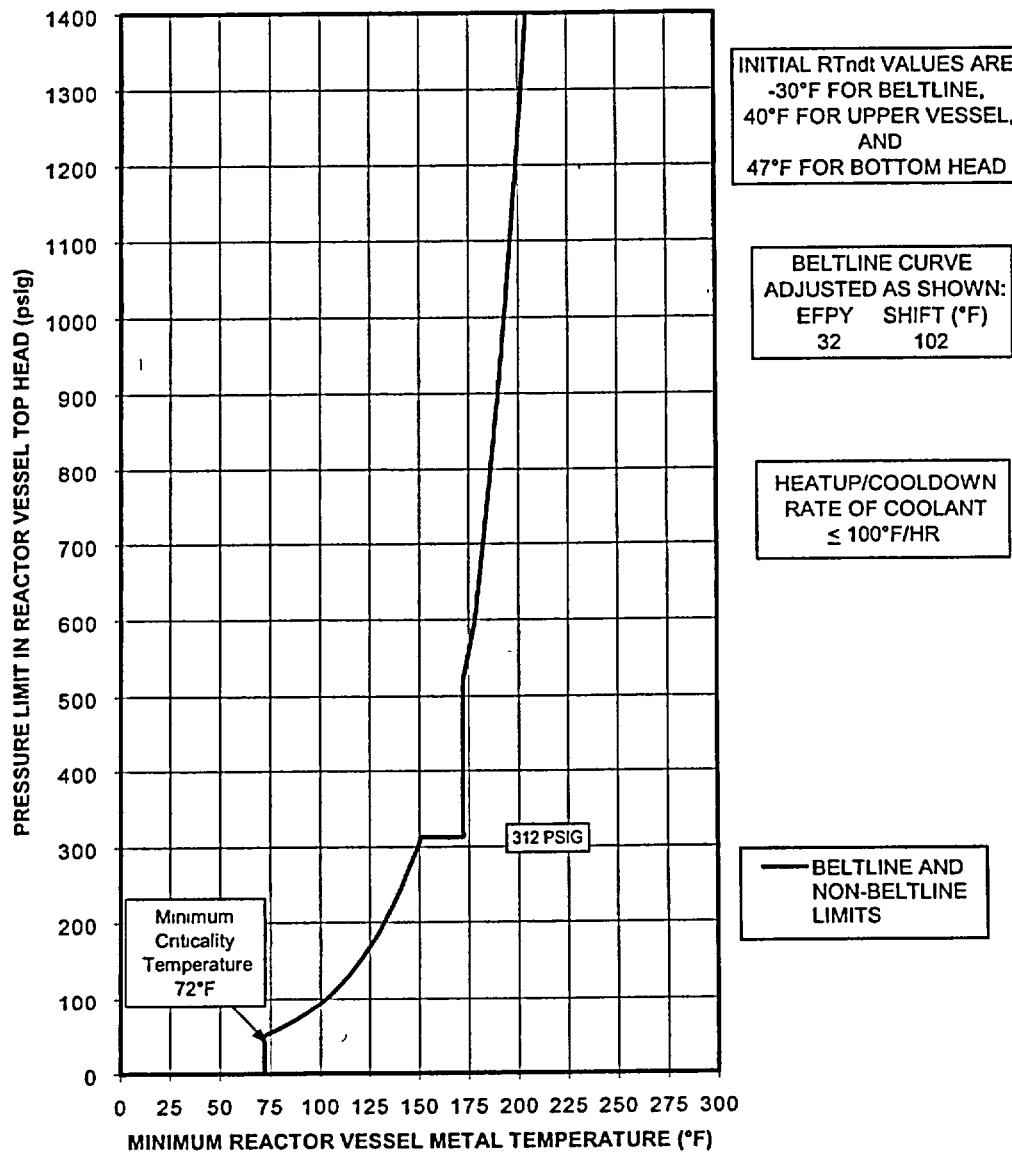


P-T Curves for Heatup by Non-Nuclear Means, Cooldown Following  
A Nuclear Shutdown and Low Power Physics Testing

Figure 3.4.11-2 (Page 1 of 1)

Unit 1  
Minimum Reactor Vessel Metal Temperature vs.  
Reactor Vessel Pressure (Valid up to 32 EPFY)

UNTIL DECEMBER 15, 2004

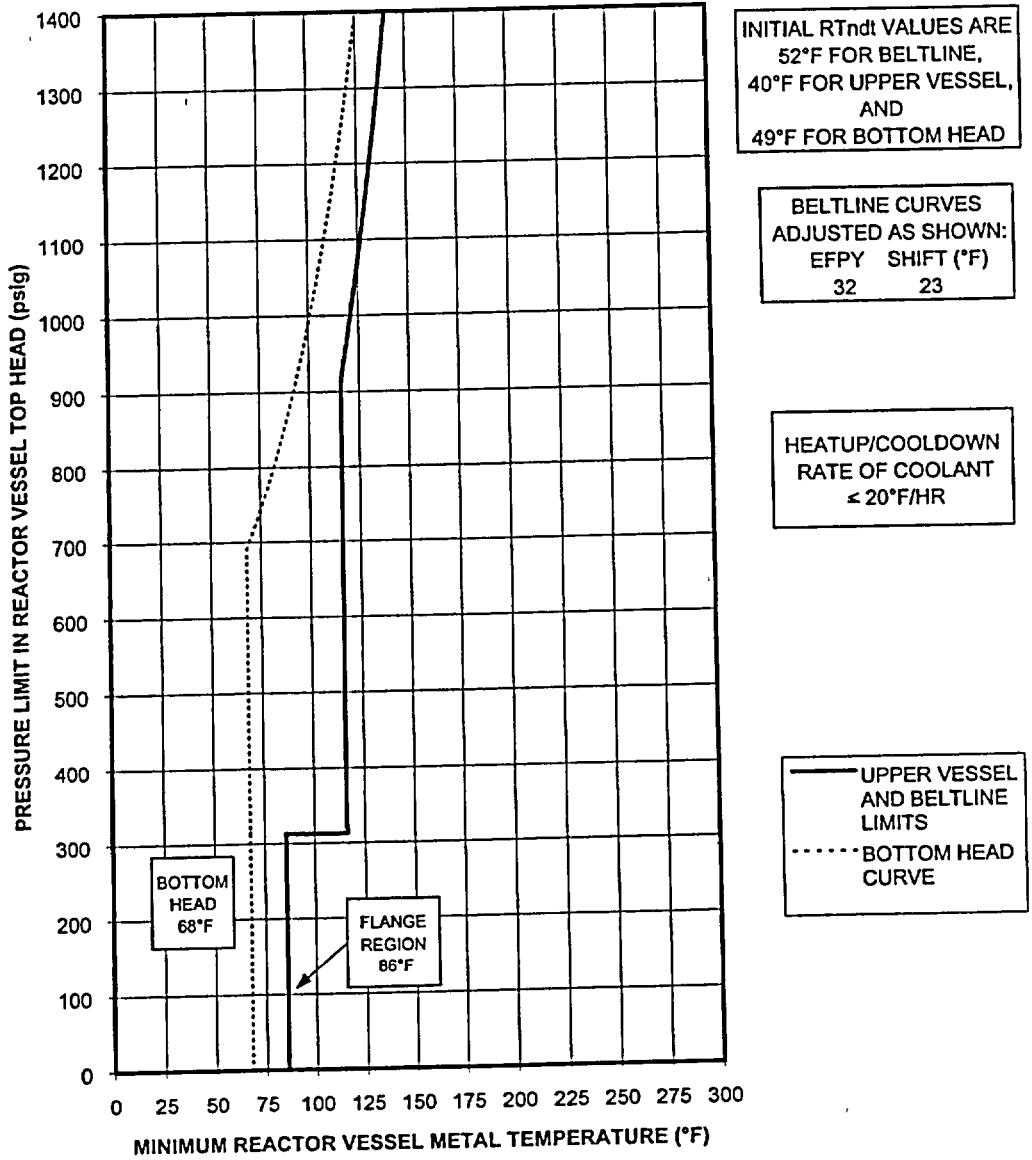


P-T Curves for Operation with a Core Critical  
other than Low Power Physics Testing

Figure 3.4.11-3 (Page 1 of 1)

Unit 1  
Minimum Reactor Vessel Metal Temperature vs.  
Reactor Vessel Pressure (Valid up to 32 EFPY)

UNTIL DECEMBER 15, 2004



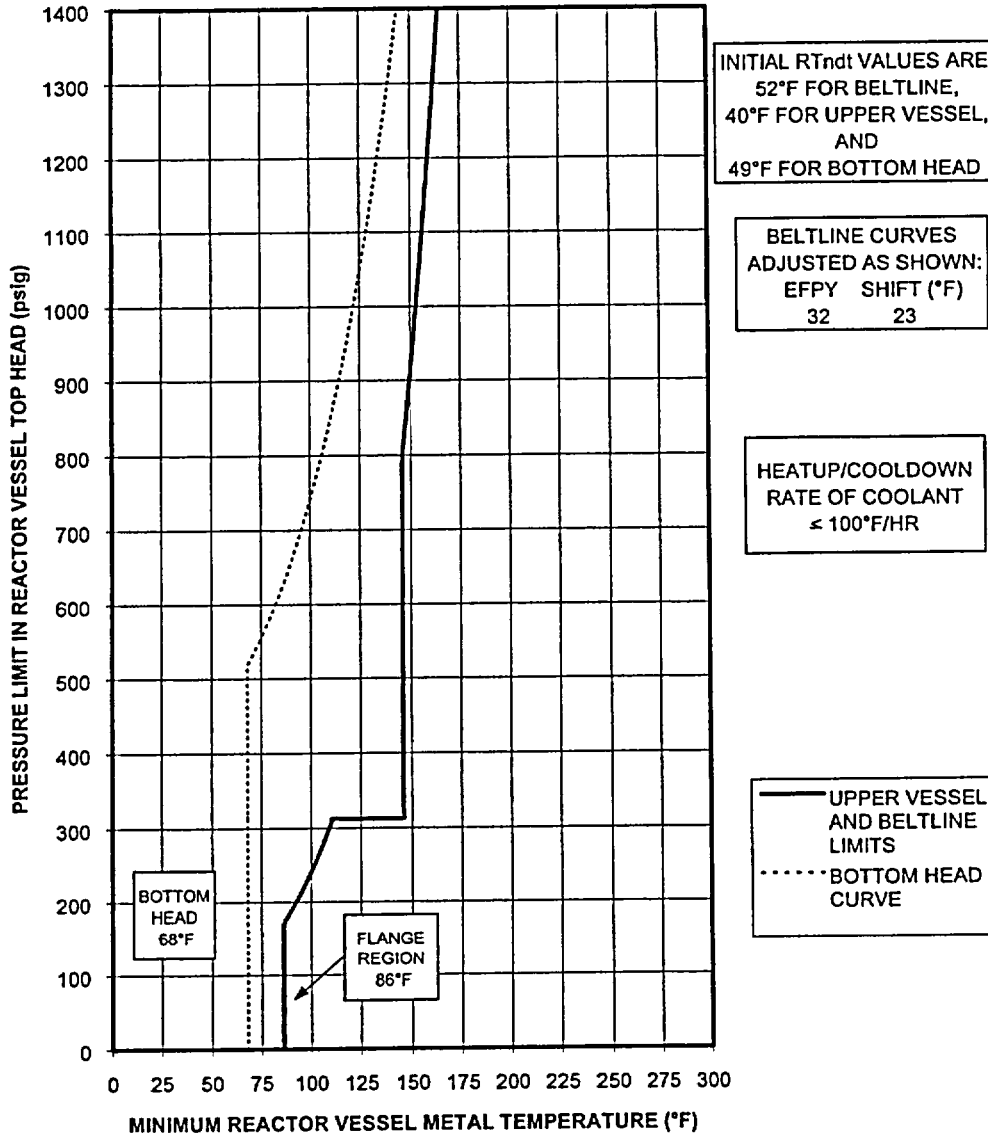
P-T Curves for Hydrostatic or Leak Testing

Figure 3.4.11-4 (Page 1 of 1)

Unit 2  
Minimum Reactor Vessel Metal Temperature vs.  
Reactor Vessel Pressure (Valid up to 32 EFPY)

UNTIL DECEMBER 15, 2004



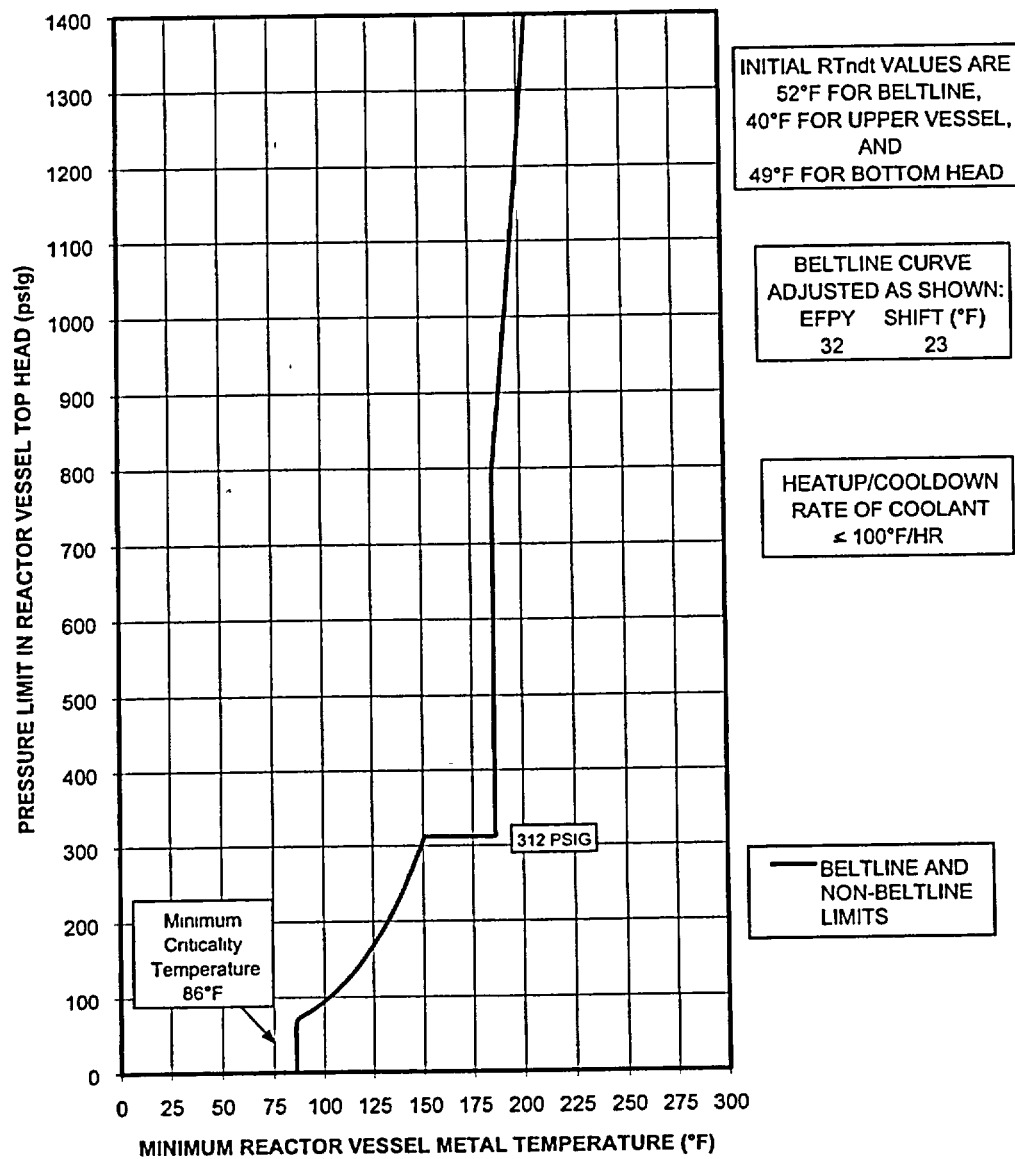


P-T Curves for Heatup by Non-Nuclear Means, Cooldown Following  
A Nuclear Shutdown and Low Power Physics Testing

Figure 3.4.11-5 (Page 1 of 1)

Unit 2  
Minimum Reactor Vessel Metal Temperature vs.  
Reactor Vessel Pressure (Valid up to 32 EFPY)

UNTIL DECEMBER 15, 2004



P-T Curves for Operation with a Core Critical  
other than Low Power Physics Testing

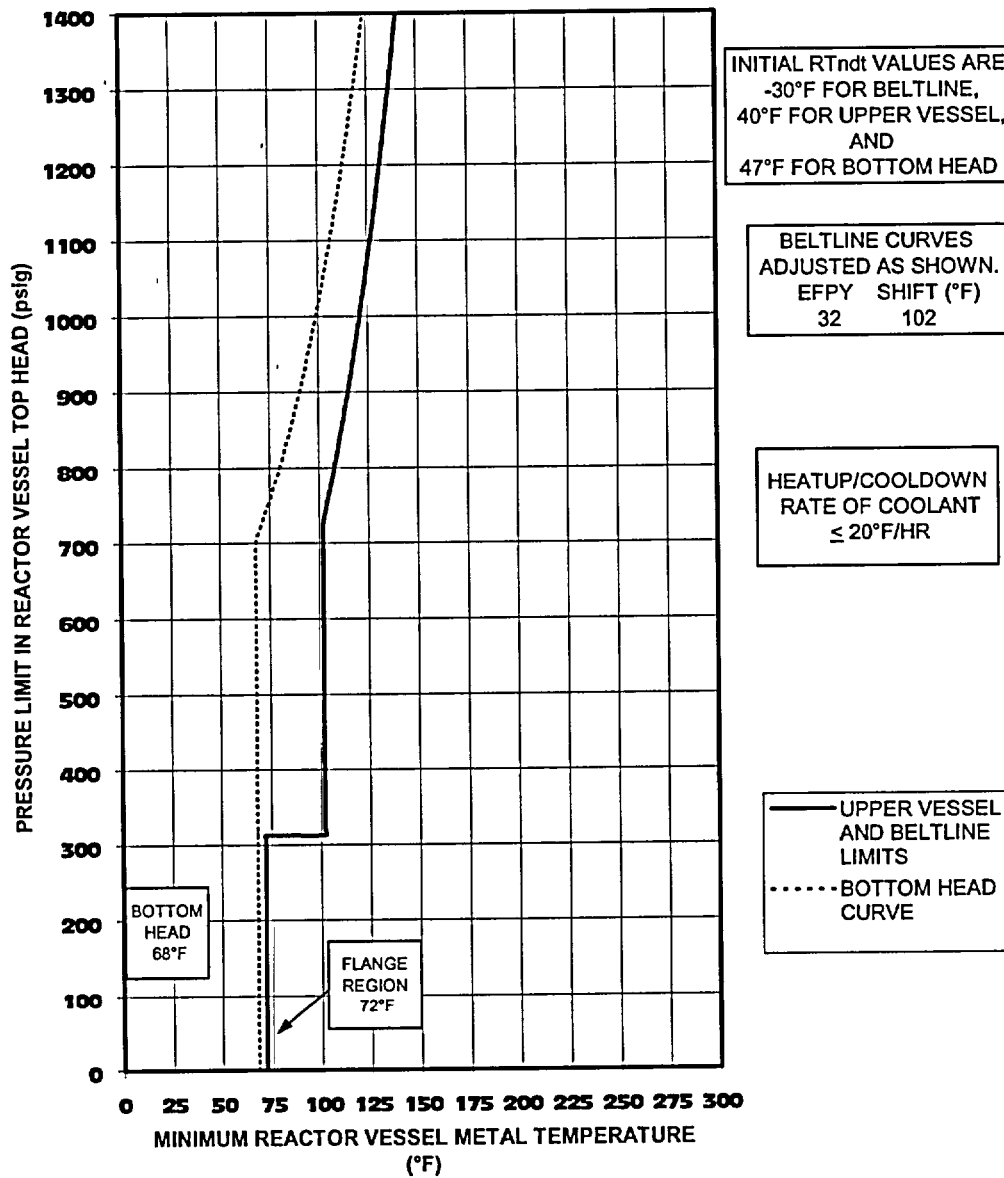
Figure 3.4.11-6 (Page 1 of 1)

Unit 2  
Minimum Reactor Vessel Metal Temperature vs.  
Reactor Vessel Pressure (Valid up to 32 EFPY)  
*UNTIL DECEMBER 15, 2004*

**ATTACHMENT 4**

**RETYPE PAGES  
FOR  
TECHNICAL SPECIFICATIONS CHANGE**

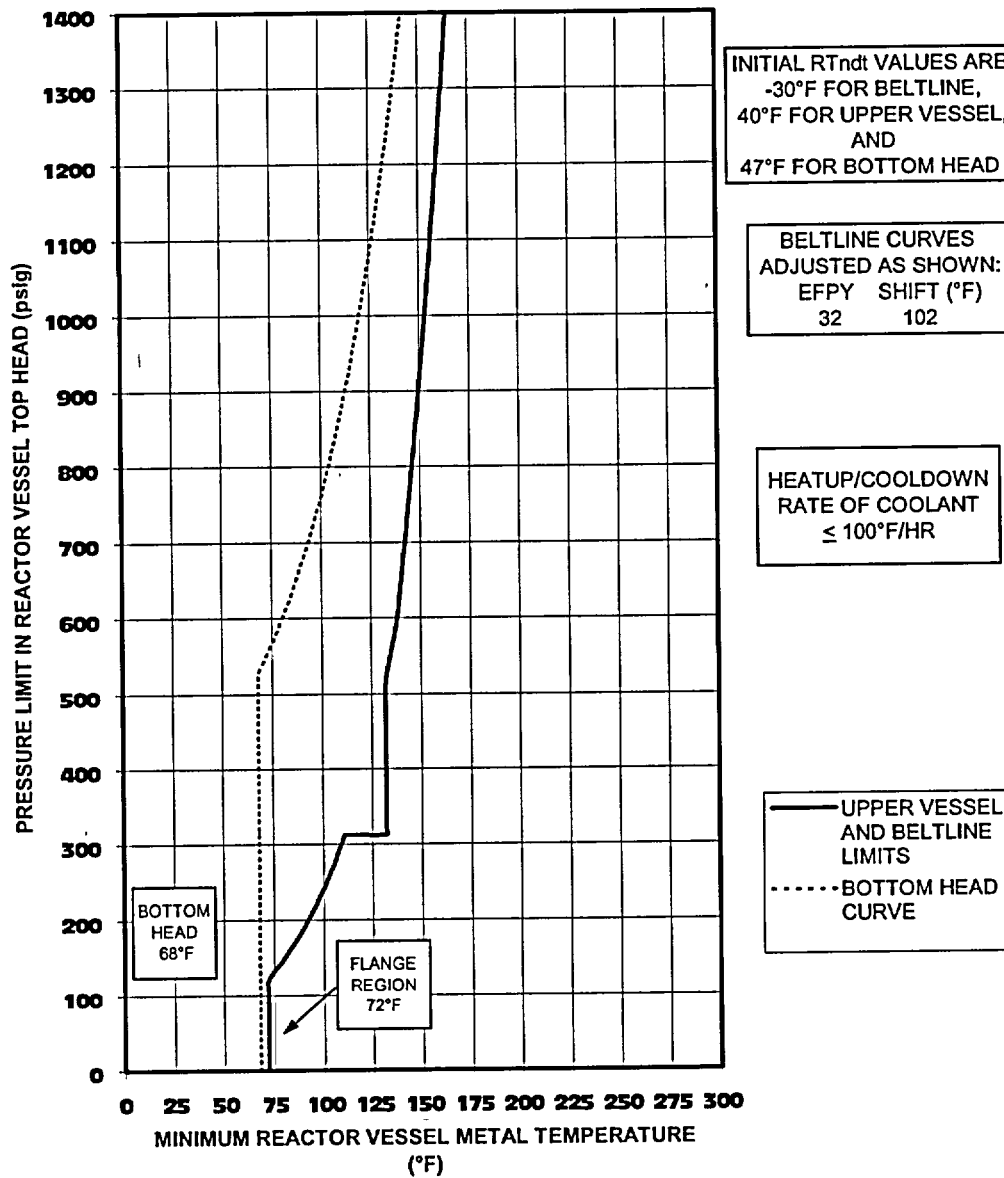
Retyped TS Pages



P-T Curves for Hydrostatic or Leak Testing

Figure 3.4.11-1 (Page 1 of 1)

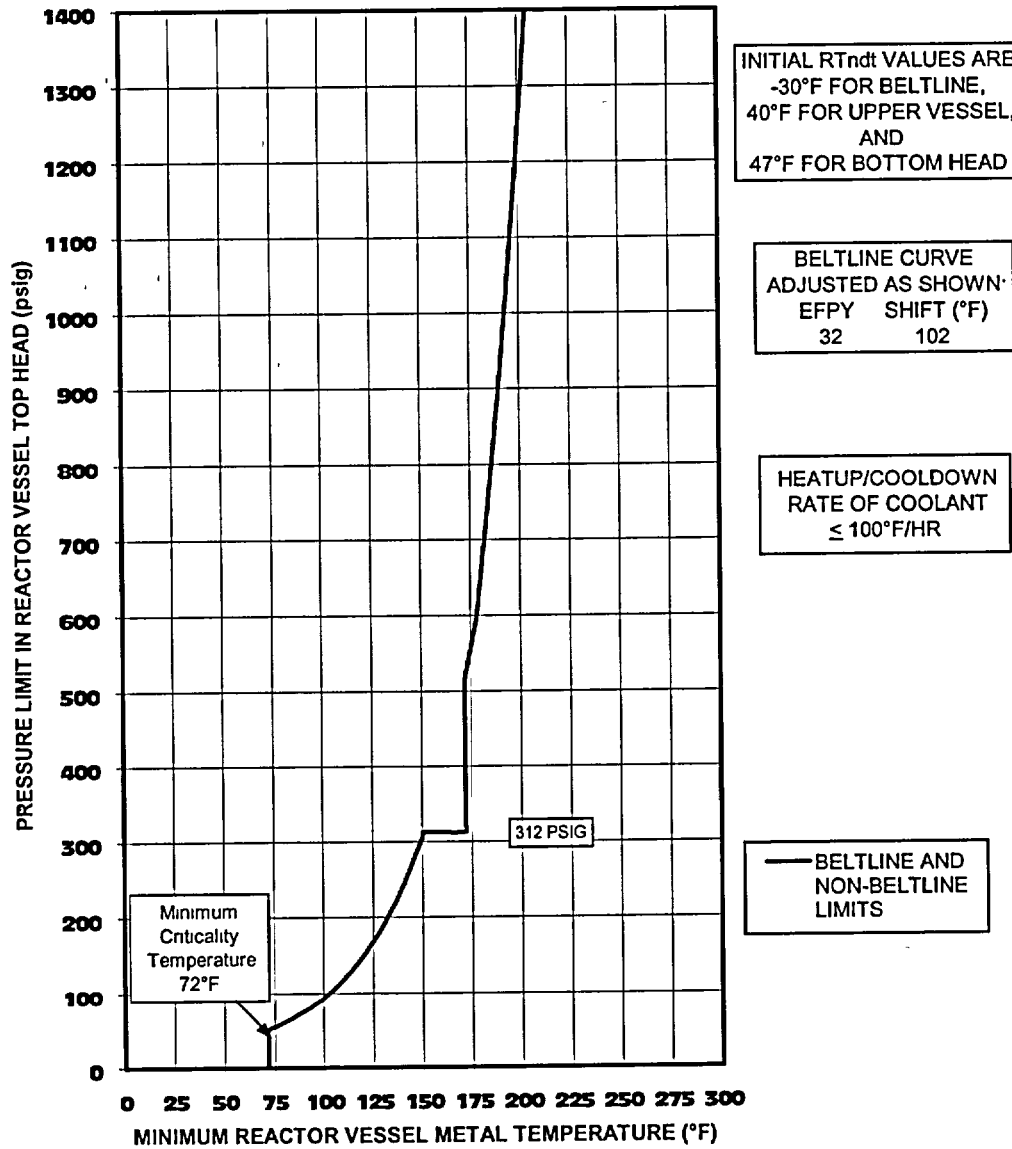
Unit 1  
Minimum Reactor Vessel Metal Temperature vs.  
Reactor Vessel Pressure (Valid until December 15, 2004)



P-T Curves for Heatup by Non-Nuclear Means, Cooldown Following A Nuclear Shutdown and Low Power Physics Testing

Figure 3.4.11-2 (Page 1 of 1)

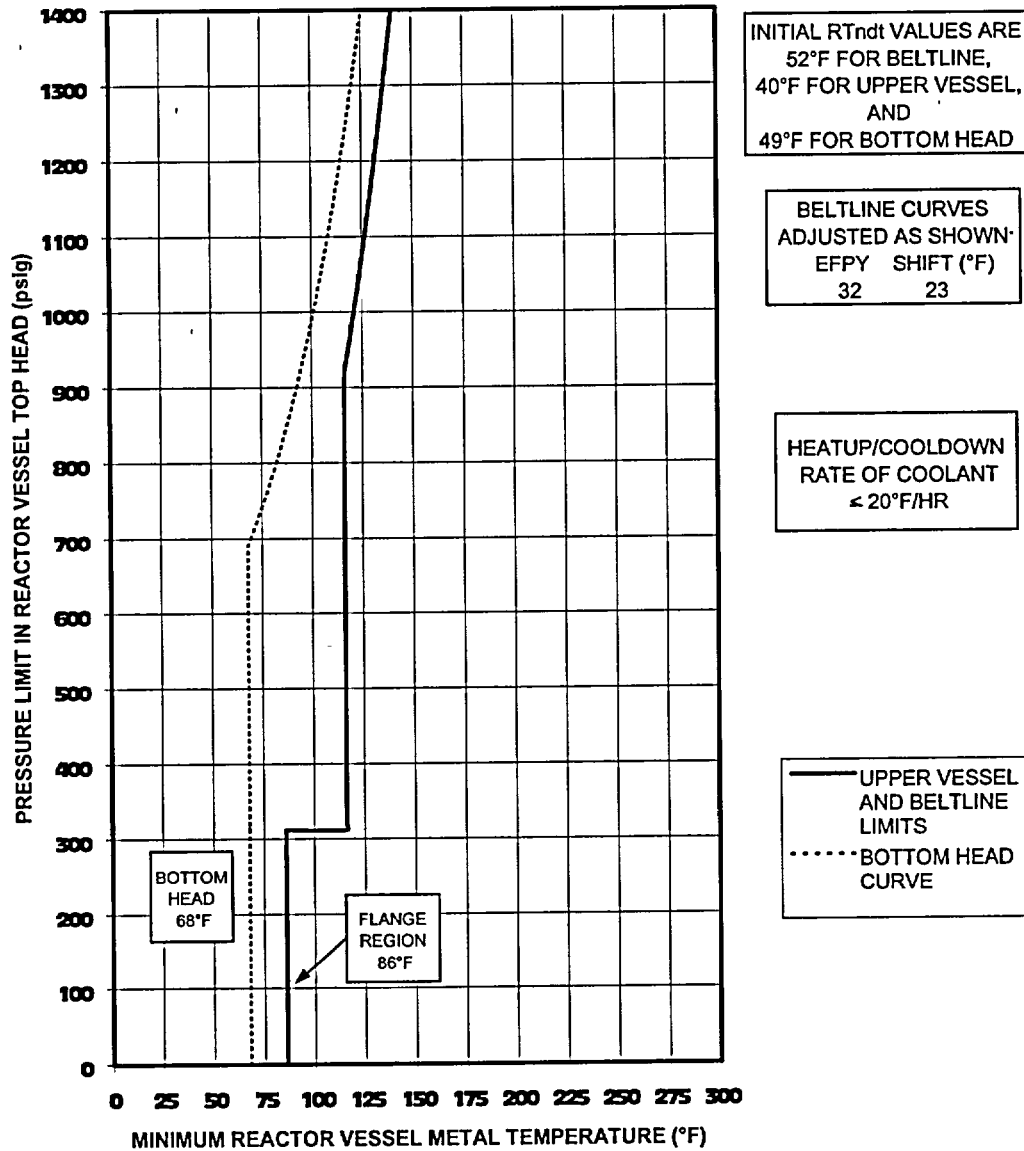
Unit 1  
Minimum Reactor Vessel Metal Temperature vs.  
Reactor Vessel Pressure (Valid until December 15, 2004)



P-T Curves for Operation with a Core Critical  
other than Low Power Physics Testing

Figure 3.4.11-3 (Page 1 of 1)

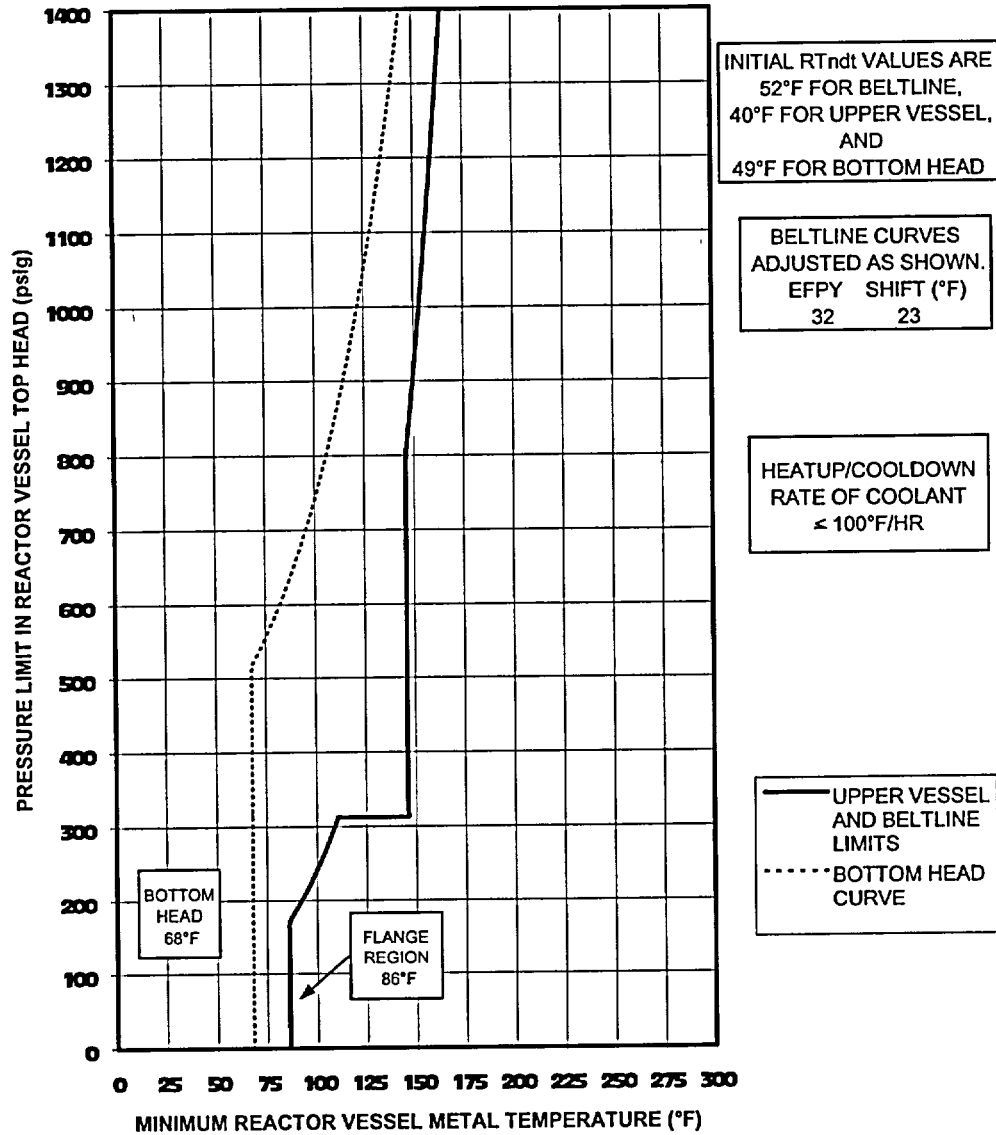
Unit 1  
Minimum Reactor Vessel Metal Temperature vs.  
Reactor Vessel Pressure (Valid until December 15, 2004)



P-T Curves for Hydrostatic or Leak Testing

Figure 3.4.11-4 (Page 1 of 1)

Unit 2  
Minimum Reactor Vessel Metal Temperature vs.  
Reactor Vessel Pressure (Valid until December 15, 2004)

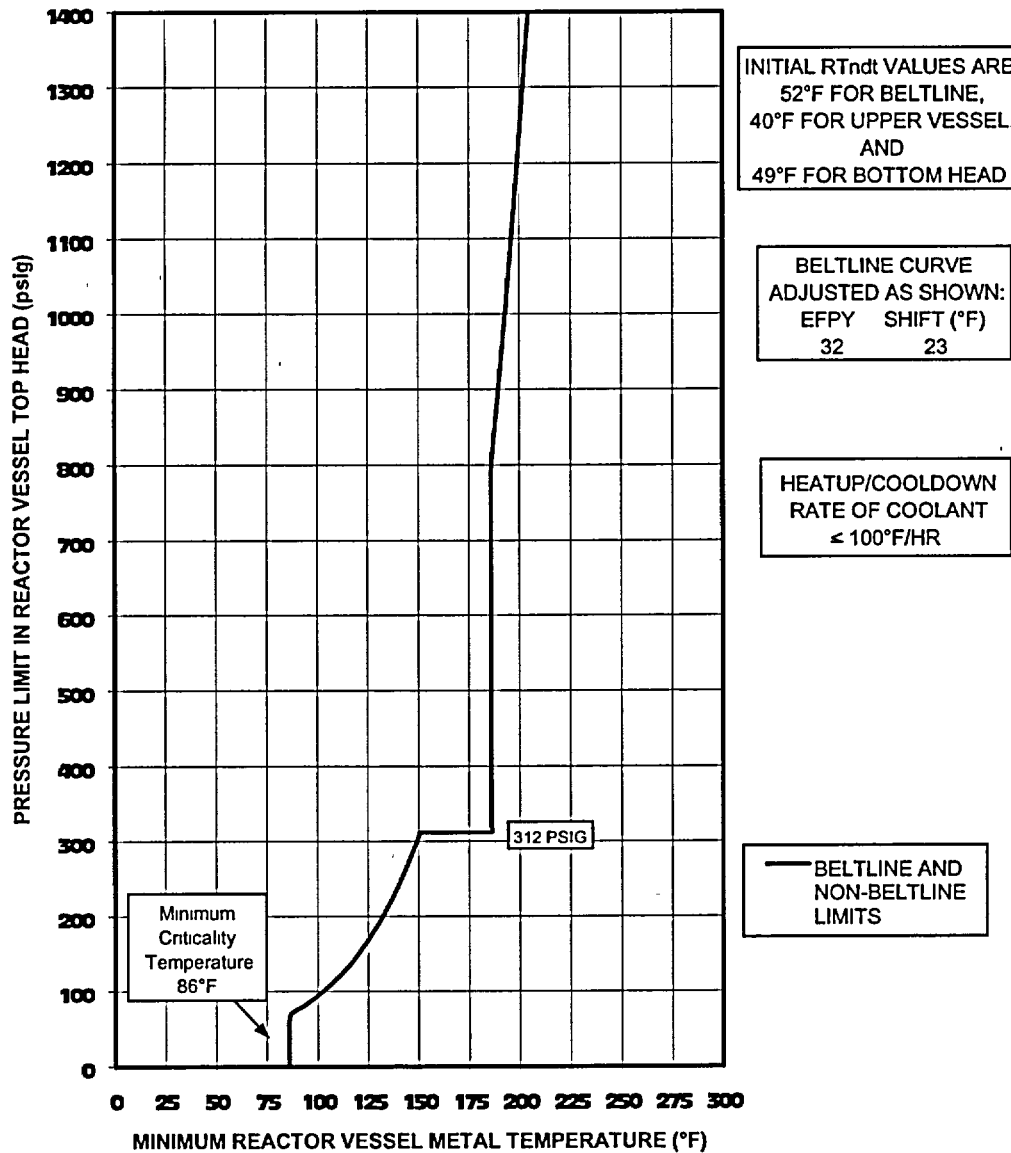


P-T Curves for Heatup by Non-Nuclear Means, Cooldown Following A Nuclear Shutdown and Low Power Physics Testing

Figure 3.4.11-5 (Page 1 of 1)

Unit 2  
Minimum Reactor Vessel Metal Temperature vs.  
Reactor Vessel Pressure (Valid until December 15, 2004)





P-T Curves for Operation with a Core Critical  
other than Low Power Physics Testing

Figure 3.4.11-6 (Page 1 of 1)

Unit 2  
Minimum Reactor Vessel Metal Temperature vs.  
Reactor Vessel Pressure (Valid until December 15, 2004)